

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the matter of

Requirements for Digital Television  
Receiving Capability

ET Docket No. 05-24

**REPLY COMMENTS OF CHRIS LLANA**

*Further Notice of Proposed Rulemaking*

**Introduction**

Time to complete the transition from the old analog to the new digital TV standard already ran out once for the American public. Even with the two-year reprieve now being implemented by Congress, time is close to running out again. Once is enough.

The public needs a certain minimum amount of time to plan and prepare for end of the transition. The public needs time to buy ATSC television sets well in advance of the end of the transition—*all sizes* of digital TVs, including ones smaller than 25”.

It is because of past aggressive lobbying by the consumer electronics industry that small digital television sets are not available now. For years they seemed to be completely happy with the prospect of manufacturing and selling NTSC-only television sets six months after analog broadcasts were to have been shut down. This demonstrated disconnect between the purpose of the transition and the actual date set for its end is illustrated by their comments in this proceeding.

Those comments and recent Congressional testimony by most parties also indicate a readiness to force another unconscionable delay in the end of the

transition. Everyone seems eager to manipulate the transition schedule into conformance with their own preferred schedules. All seem to be laying the groundwork for that option, with the government being set up to take the blame.

Once consumers become explicitly aware of the details of the transition, demand for ATSC televisions will ramp up, even as acceptance of NTSC television sets drops off to nothing. The longer the delay in availability of all size ATSC sets (meaning less time to buy them before analog shutdown), the greater the demand for digital sets once they finally arrive.

It won't be just the people who rely on over-the-air reception who will want to buy digital televisions. Once it becomes clear that the United States has adopted a new, superior, and incompatible television standard, most everyone will want one, including cable and satellite customers. People will feel a need to own a set that conforms with the new digital standard. They will correctly believe that they are missing out on something. It's human nature.

Even though cable customers will be able to receive downconverted programming that will display in some form on their 4:3 analog TVs, those sets will be perceived to be (and are in fact) inferior, obsolete, and antiques. Certainly there will be some people who won't care (at least for awhile, until the black bars get to them), but most people will want to buy an ATSC set.

The "deadline" marking the passing of the NTSC standard will stick in their minds. Demand will escalate as soon as the word is out and will peak at the end of the transition, when that becomes the big news story.

The consumer electronics industry has made it clear that it wants to maintain a steady production of television sets from year to year (i.e. no sudden drop-off of analog TVs). My interpretation is that there is a certain manufacturing capacity that the industry would like to see fully employed, and which at the same time could not easily be ramped up to meet a high transient demand for new television setss. Doing so would require a large capital investment in production capacity that would be needed for only a couple of

years. Nobody's going to do that.

If the last date that small analog-only televisions can be sold is kept at July 1, 2007, consumers will only have 18 months in which to buy them before the end of the transition. This would not be enough time for the industry to build enough digital sets to nearly meet the demand, which can be expected to be several times normal. Prices would be high at the introduction, would stay high and would go up as the end of the transition approached. Demand would outstrip supply; panic buying would set in. Consumers would be very unhappy. Who would they blame?

If the Commission changes the date to July 1, 2006, then consumers would have another year to buy small digital sets. Supply would more closely meet demand. Prices would be more reasonable.

If the Commission (with Congressional input) cannot adopt the July 1, 2006 date, then the date must be no later than October 1 through November 1, 2006. The latter dates would be acceptable only if an NTSC labeling requirement mandating clear and explicit warning language becomes effective early in 2006 (sooner is better). This range of dates reflects the normal period for the introduction of new TV models (July through October) in order to have product in the stores before the holiday buying season.

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## **A. The American Public**

### **1. Consumers and the end of the transition**

With the end of the transition coming on fast, consumers need to be able to buy TV sets with digital reception capability soon if the transition is to be successful. Everyone can't wait until the last minute; that simply won't work. And as noted by the CEA a few years ago, "Ensuring that today's viewers continue to enjoy free, over-the-air service should remain the primary focus of

the transition, as mandated explicitly by Congress.”<sup>1</sup>

Consumers also expect that any TV set they buy should last for a reasonable period of time. In the absence of a fair warning to the contrary (eg. a label), that expectation would be for the set to give good service for ten to twenty years. As Philips noted in their comments,<sup>2</sup> “Television sets are extremely reliable and reasonably priced. Many sets remain in service two and three decades after delivery.”

This won’t happen for those analog sets sold two or three or five years before the shutoff of analog broadcasts. It is unreasonable to expect that people will be using these NTSC sets for viewing VHS tapes or playing games for the next ten or twenty years. Why wouldn’t they simply use the same digital set they use for regular TV viewing for these other non-broadcast purposes? Go up to the attic to look at a VHS tape?

The next generation of video games has been designed for high-definition TV sets. X-Box 360 will initially come with a regular DVD drive, but is expected to quickly transition to HD-DVD, and Sony’s PlayStation 3 will be equipped with Blu-Ray Disc drives when released next year. Post-transition game players are not going to settle for an old 4:3 conventional definition analog set.

It is unconscionable to induce consumers to buy an NTSC-only set now, without fair warning, much less in 2007, knowing that the consumer in almost every case will feel compelled to replace that set within a few years. Certainly that benefits TV builders and retailers, but it would be an injustice for the consumer.

In its comments, Philips would have us believe that selling consumers analog-only TV sets a couple of years before the shutoff is to their benefit:

“Retention of the current DTV tuner deadline would be pro-consumer

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<sup>1</sup> CEA Reply Comments, June 16, 2000, MM Docket No. 00-39, at 3

<sup>2</sup> Philips Doc. 05-24 FNPRM comments at 8

because it would permit normal quality assurance processes to be followed and permit product prices to drop.”<sup>3</sup>

As a consumer, I have a lot of trouble following this logic. Presumably they’re building reliable mid-size digital sets with similar components. If they can’t alter their “normal” procedures to produce a quality product to meet consumer demand, they can delay the introduction. What would be required is that they not sell those NTSC-only TVs that continue to sabotage the transition.

As for the assertion that a late introduction of small ATSC television sets would permit product prices to drop, that flies in the face of common sense. Perhaps in the absence of an analog-to-digital TV standard transition there might be some business model that would explain those claims, but here they simply demonstrate Philips’ business-as-usual mindset.

## 2. Industry attitudes toward consumers

The interests of consumers are not the same as the industry’s interests. But many industry comments seem unwilling to acknowledge even that much. It is reminiscent of the old slogan “What’s good for General Motors is good for the country.”

The TV version goes something like this: What’s good for the TV industry is good for the consumer and good for the transition. Anything that the industry doesn’t want will harm the consumer and delay the transition.

Saying it doesn’t make it so, even if they repeat it three hundred times.

Example:

“This time period is absolutely necessary to make changes to television sets, and departing from that process now could only negatively affect the provision of reliable digital receivers at the very critical moment that consumers must have a good experience if the transition is to succeed.”<sup>4</sup>

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<sup>3</sup> Philips Doc. 05-24 FNPRM comments at 8.

<sup>4</sup> Philips Doc. 05-24 FNPRM comments at 5-6.

Are we to believe that consumers who unwittingly buy a reliable analog-only TV set less than 2 years before analog broadcasts are shut off will regard that as a good experience?

Getting digital television sets to market merely before the end of 2008 is not nearly good enough. We're at a late stage in the transition; people are supposed to be actually watching digital television channels NOW. It's a ten-year *transition*; December 31, 2008 is not supposed to be some big national switch-over day—NTSC one day, ATSC the next. Some of the commenters just don't get it. People using small TVs can't watch the digital channels if there are no small ATSC television sets for sale.

Many of the comments seemed to embody an arrogant paternalistic attitude toward the public. In other words, "we know what's best for the consumer." For example, the CEA characterized the issue of labeling as "whether consumers . . . can possibly determine *for themselves* under what circumstances they will need a tuner for digital over the air signals."<sup>5</sup> (emphasis added)

Philips suggested that "In the case of digital television sets, changing the deadlines at this late date would harm, not benefit the transition. Nor is there a compelling reason to do so."<sup>6</sup>

The "compelling reason" of course is that the end of the transition is fast approaching and consumers need to be able to buy ATSC televisions in order to benefit from the superior video and audio quality of the widescreen digital/HD programming already being broadcast. The "compelling reason" is that consumers forced to buy small NTSC-only televisions before July 2007 would be stuck with sets that will cease to function altogether in less than two years unless they go out and buy a D/A STB, and *then* they would be stuck with an inferior 4:3 analog-quality picture and a cumbersome STB for another 20 years.

That may not seem *compelling* for the consumer electronics industry,

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<sup>5</sup> CEA/CERC Doc. 05-24 FNPRM comments at 14.

<sup>6</sup> Philips Doc. 05-24 FNPRM comments at 6.

because apparently from their perspective the consumer can easily go out buy a new digital TV after a year or two. But it's a compelling reason for the consumer.

Multiply that consumer by tens of millions and I'd call that a pretty compelling reason for advancing the date to mid-2006.

## **B. In Search of a Date**

### **1. Timing**

As I mentioned in my comments, I recommend setting the date for mandating digital reception in small sets at the earliest date that is *politically* feasible. (For the consumer to gain the most benefit, the date would be now, but that's not going to happen.)

The new TV product press releases I've seen recently have announced new model introductions for June through October in one announcement and July through September in another. This cycle puts new models on the showroom floor in time for the holiday buying season.

TiVo in its comments provides reasons why a December 31 date would create problems for the industry.<sup>7</sup> A December 31, 2006 date would also leave holiday shoppers with no small digital TVs to buy; many would buy 4:3 NTSC-only sets as gifts without fully understanding the implications (like sending a winter parka to a Miami resident).

The March 1, 2007 date suggested by other industry commenters is similarly unhelpful to the transition. That date would flood another year of obsolete analog TV sets into American homes. Neither does the March 1 date coincide with normal product introductions.

Philips describes the March 1, 2007 date as ensuring that digital tuners will be in TV sets "long before analog broadcasts are likely to cease in 2009."<sup>8</sup>

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<sup>7</sup> TiVo Doc. 05-24 FNPRM comments at 2.

<sup>8</sup> Philips Doc. 05-24 FNPRM comments at 2.

First, one year and ten months can hardly be called “long before” the end of the transition, considering the two to three decades life of a television set cited by Philips elsewhere. The reference to “2009” for the shutoff of analog broadcasts sets up a push to further delay the end of the transition (discussed *infra*) that might result from the late introduction of digital TV sets into the marketplace.

The July 1 or October 1, 2006 dates I suggested in my comments, or the November 1, 2006 date suggested by Motorola<sup>9</sup> all fall within that part of the year when new products are normally introduced and all of those dates would facilitate the availability of small digital TVs during the 2006 holiday buying season. (It’s unfortunate that there will be no small ATSC sets in stores for the 2005 holiday season.)

## 2. Industry reliance on the FCC’s 2002 digital tuner requirement

CEA/CERC and TiVo in their comments claim reliance on the existing 2002 digital tuner requirement for small sets as justification for their alleged inability to produce ATSC TVs any sooner. “This date has been relied upon in the product and resource planning of manufacturers and in the merchandising and marketing plans of retailers.”<sup>10</sup>

It seems odd that they would claim reliance on that particular requirement, since the consumer electronics industry fought so hard to keep it from being implemented. Disney/ABC’s comments<sup>11</sup> document unsuccessful government efforts to require digital tuners in TV sets by 2001 and then again by 2003, shot down by industry lobbying (spike through the heart, indeed).

These earlier DTV tuner dates would have made sense, given the 1996 Communications Act establishing the current end-2006 analog shutoff date.

Why didn’t the industry rely on that existing statutory analog cutoff date when planning manufacturing and marketing schedules? Seems they

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<sup>9</sup> Motorola Doc. 05-24 FNPRM comments at 2.

<sup>10</sup> CEA/CERC Doc. 05-24 FNPRM comments at 3.

<sup>11</sup> Disney/ABC Doc. 05-24 FNPRM comments at 3-4.

instead relied on it being *delayed*. Didn't it seem a little odd to them to be planning to build and sell NTSC sets six months after NTSC broadcasts were scheduled to end?

There was the 85% caveat, but the only rational interpretation of the 85% rule is that at least 85% of TV households would not lose programming at the end of the transition (an interpretation that was advanced soon after the 1997 legislation was enacted). As many industry voices keep telling us, approximately 88% of TV households receive service from cable or satellite (average; individual TV markets may vary).

But let's test that interpretation. Say 100% of TV households got their programming via cable, but only 20% of those households had ATSC TVs or D/A converter boxes. Say the cable companies all converted the signals to analog for their NTSC customers. Then at the end of 2006, if analog broadcasts were shut off, not a single person's TV would go dark. Nobody would notice any change at all. And yet, only 20% of TV households would be capable of receiving broadcasters' digital over-the-air signals—far short of the required 85% if you buy into the biblical interpretation. So, shut off analog broadcasts or wait?

If you wanted to delay the transition, you could advance any interpretation at all, however implausible, or you could simply obfuscate. The reality of this politically-charged transition is that nobody has relied on anything they didn't like.

TiVo says it relied on the Commission's 2002 regs and *then* claims even the existing July 2007 date results in hardships. "...the Commission's proposal to advance the DTV Tuner Deadline to December 31, 2006 would create a tremendous hardship to TiVo. Although these hardships are factors even with the July 1, 2007 DTV Tuner Deadline..."<sup>12</sup> That's with five years of notice, or more than ten if you count the 1996 statute as providing a clue. That's not enough time to prepare?

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<sup>12</sup> TiVo Doc. 05-24 FNPRM comments at 4.

The consumer electronics industry participated in the development of the U.S. digital TV standard beginning in the 1980s, with representation in the Advisory Committee on Advanced Television Services, in the Grand Alliance, and on the ATSC. They knew very well where the transition was headed, and presumably understood the planning requirements for building digital TV sets well in advance of the end-2006 analog shutoff date (unless their intent was always to force delays).

Is it reasonable to rely so heavily on any DTV transition requirement remaining unchanged? After all, this is the only time the U.S. has changed from one television standard to another incompatible one—it's completely uncharted territory. Anyone familiar with transition proceedings over the years knows that midcourse corrections are needed, appropriate, and expected, and happen frequently.

The Consumer Electronics Association apparently agrees:

“As the Commission recognized when it promulgated regulations to govern digital broadcasting, during the transition periodic reviews are needed to ensure that timetables are adhered to, unresolved issues are addressed, and appropriate adjustments are made.”<sup>13</sup>

CEA used the same reasoning when they submitted their *petition to change the DTV tuner schedule* (actually, resulting in the opening of this very docket #05-24).

Although you'd never know that from the comments.

Philips complains about the FCC wanting to change the dates: “It is simply not feasible at this late date to revamp dramatically these plans *yet again*.”<sup>14</sup> (emphasis added) What do they mean by “yet again”? Isn't this the *first* time that the dates have been proposed to be changed (Docket No. 05-24). The existing July 1, 2007 tuner mandate for small sets was the original date—never changed before. I thought.

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<sup>13</sup> CEA comments, May 17, 2000, MM Docket 00-39, at 4.

<sup>14</sup> Philips Doc. 05-24 FNPRM comments at 2.

Philips further complains: “*With each deadline change*, manufacturers must revisit personnel assignments and manufacturing capacity plans already made...”<sup>15</sup> And: “*Constantly changing the goal posts* inevitably adds significant cost when the entire planning process must be substantially changed to meet new dates.”<sup>16</sup> (emphasis added) Maybe I missed something.

Perhaps Philips is leaning to melodramatic exaggeration to attract regulatory sympathy, or perhaps to shift blame to the government for their own marketing miscalculations.

Consideration of a date change was made by the FCC at the behest of the CEA and CERC; Philips should perhaps take its complaints to them. If you open the box, you should be prepared to accept what comes out.

### 3. Ability of industry to produce small digital TVs

“CEA and its members have invested in digital consumer products and elected the ‘fast lane’.”<sup>17</sup>

“Receivers produced by multiple manufacturers in the very competitive consumer electronics marketplace almost constantly are being re-designed and rapidly improved.”<sup>18</sup>

And now:

“Based on the experience with larger size receivers, it is incorrect to conclude that the general population of manufacturers could meet dates for smaller sizes earlier than those that were established in the August 2002 Digital Tuner Order.”<sup>19</sup>

Except that CEA/CERC and other industry commenters say they can actually meet a date four months earlier than that, i.e. March 1. So then it *would* be correct to conclude that TV manufacturers can meet earlier dates.

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<sup>15</sup> Philips Doc. 05-24 FNPRM comments at 6.

<sup>16</sup> Id.

<sup>17</sup> Consumer Electronics Association comments, May 17, 2000, MM Docket 00-39, at 10.

<sup>18</sup> Id. at 13.

<sup>19</sup> CEA/CERC Doc. 05-24 FNPRM comments at 6.

TiVo and Philips say they don't want the date to coincide with the holidays. Could that have been a factor in deciding on the March 1 date?

“The Proposed Acceleration to a Date No later than December 31, 2006 Would Contravene The Repeatedly Recognized 18-24 Month Manufacturing Cycle.”<sup>20</sup>

If you repeat the mantra “18-24 month manufacturing cycle” often enough, it is true that some people will “recognize” it. Even if you accept that it is gospel (for the “general” population of TV manufacturers), it provides no useful information to policy-makers without additional data.

Such as: What variations in that general product cycle exist across the industry and what expedited product cycles are possible (not generally speaking, but for specific manufacturers and for specific models)? What are the specific *start* dates for the cycle for specific manufacturers and specific small ATSC TV models? Have no manufacturers begun planning for small ATSC TV sets? How many models are planned if the existing tuner mandate date is retained? If the date is moved to March 1, 2007? To November 1, 2006? To July 1, 2006? If the date is set at March 1, 2007, will all TV manufacturers simultaneously introduce their lines of small ATSC televisions on or around that date (If so, what a coincidence!)? If the DTV tuner requirement is set at July 1, 2006, would *any* manufacturer be prepared to introduce a small ATSC set by then? How many models/sizes?

Without specific data to the contrary, the Commission must assume that some capability resides with one or more manufacturers to produce small ATSC television sets by the July to October, 2006 time frame. The FCC must also assume that manufacturers have already started on small ATSC designs, and that an early mandated removal of small NTSC-only sets from the market would accelerate the introduction of small ATSC TVs. Removing NTSC television sets from the market remains the most critical consideration; that can be readily implemented by all manufacturers.

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<sup>20</sup> Philips Doc. 05-24 FNPRM comments at 4.

And let's not forget—that “recognized” 18 to 24 month industry cycle is trivial compared to the 10 to 20 *year* product replacement cycle that consumers must live with.

#### 4. Digital receiver performance and costs in 2006

Digital tuner/demodulator price and performance have greatly matured over the last couple of years. The 5th generation 8-VSB chips from Zenith and ATI exhibit significant performance improvements over older designs;<sup>21</sup> these 5G chips will show up in digital sets this fall. In 2006, advanced 8-VSB tuner/demodulator chips will cost 40% of what inferior chips cost in 2003.<sup>22</sup> In its comments in this proceeding, ATI notes that “the manufacturing cost of adding DTV functionality to a television receiver will be less than forty U.S. dollars by the fall of 2006.”<sup>23</sup>

The Consumer Electronics Association has touted the performance and cost benefits of digital receivers over their analog counterparts:

“The DTV Standard also is relatively immune to receiver-generated noise, such as the phase noise generated by the frequency synthesizers used in television set tuners. *These characteristics of the standard permit more economical receivers* and fewer disruptions to service.”<sup>24</sup>  
(emphasis added)

The United States (along with the rest of the world) is moving to a digital TV standard because of the tremendous benefits it will confer on all parties, notwithstanding the temporary disruptions and expense that such a large undertaking by necessity must entail. In the big scheme of things, designing and building new small digital TVs in time for the transition cannot be seen as the insurmountable challenge the industry makes it out to be.

Third party 8-VSB/QAM/NTSC chips are now readily available from vendors such as ATI. It wouldn't seem like a big leap to incorporate the

<sup>21</sup> See ATI comments in Docket 05-182.

<sup>22</sup> Id.

<sup>23</sup> ATI Doc. 05-24 FNPRM comments at 3.

<sup>24</sup> CEA comments, May 17, 2000, MM Docket No. 00-39, at 20.

integrated video processor used in a widescreen 26" CRT set for use in a similar 23" or 21" set, even if an HD processor is used in the larger set and SD processor in the smaller sets.

The Consumer Electronics Association seems to think as much. "CEA has described above the cost effect on consumers of a DTV tuner mandate. In dollar terms, these costs will not vary depending on the size of the display screen."<sup>25</sup>

In the current proceeding, however, they want to paint a different picture (involving a "leg up").

"It is first assumed that because the general population of manufacturers have now succeeded in engineering DTV tuners into large screen (36 inches and above) television receivers, and have begun a "50 percent" period for midsize products, they now have a 'leg up' on small format products..."<sup>26</sup>

They actually began the 50% period for mid-size sets at least 18 to 24 months ago, according to their product cycle protocols (with some manufacturers having started much earlier than that), which should mean that product development resources for small sets should already have been available for small sets (unless they want them for higher margin larger set development). That notwithstanding, the CEA/CERC comments go on trying very hard to explain why nothing they've learned from building large and mid-size digital sets would be transferable to smaller sets, and indeed, building a small digital TV would be more difficult than building a larger digital set.

I have some trouble accepting this concept. The industry has been building 26" ATSC TVs for some time and now they are saying that this doesn't help them with 23" digital sets? Is this something that never occurred to their engineers over the last ten years? (I guess these aren't the same engineers who incorporate camcorders and video monitors into cell phones.)

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<sup>25</sup> CEA Comments, April 6, 2001, MM Docket No. 00-39, at 10.

<sup>26</sup> CEA/CERC Doc. 05-24 FNPRM comments at 7.

While ATSC tuner/demodulator performance has advanced substantially in the last year or two, and the cost for high performance tuners is expected to be virtually the same as the cost of lower performing tuners, there is no way for consumers to know what model or generation ATSC tuner/demodulator is in any particular digital TV they may be considering for purchase.

It is my understanding that the FCC is testing real-world digital tuner performance. If the Commission finds that there is significant variation in performance, it should either establish minimum tuner performance requirements or require manufacturers to publish information (tech specs) on digital tuner performance and identification (make/model/generation). Alternatively, a tuner performance rating or scale could be developed to give consumers useful information with which to compare TVs.

### **C. Pitfalls and Punji Sticks**

#### **1. The nature of digital TVs that the industry will produce**

There were several statements in the CEA/CERC comments that suggested a truly disturbing prospect, if I am interpreting them correctly. The suggestion is, as I read it, that some TV manufacturers are contemplating adding an internal D/A converter to an existing 4:3 NTSC television design as a way to satisfy a requirement for digital reception capability.

Doing this would perpetrate a profound injustice on the American public, passing what are essentially NTSC television sets off for what the consumer would expect to meet both the letter and spirit of the U.S. digital TV standard. The performance of such a half-breed set would be the same as if the consumer purchased a D/A STB for his/her old analog TV.

“This is not likely to be the case, however, as to the products addressed in this FNPRM, *which in many cases will be exclusively an analog (NTSC) output.*”<sup>27</sup> (emphasis added)

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<sup>27</sup> CEA/CERC Doc. 05-24 FNPRM comments at 8.

“This illustrates that the job of engineering a new function *into an existing product chassis* may (at least for the first few generations of such a product) cost more than achieving this function in a standalone device.”<sup>28</sup> (emphasis added)

Existing small sets are 4:3 direct-view CRT units. It would be unconscionable to merely tack on a D/A converter. All new sets must have a 16:9 screen; this would imply a new product chassis. This transition is from NTSC to ATSC, and while the ATSC standard includes a 4:3 option (to accommodate early transition programming), there was clearly no intent for two parallel aspect ratio screen formats after the end of the transition. To argue otherwise would be folly. At this late stage in the transition, any usefulness of 4:3 digital television sets has passed.

At least Philips in its comments recognizes this: “. . . in light of the need to design an entirely new chassis for these smaller size sets . . .”<sup>29</sup>

## 2. Labeling

The possibility that some manufacturers may put on the market a 4:3 NTSC set with a built-in D/A converter once again raises the issue of consumer education. To wit—warning labels. All 4:3 TV sets should be required to display a separate warning label informing the consumer that standard 16:9 digital programming will not match that set’s screen shape.

TiVo’s comments point up the importance of requiring warning labels for all analog-only TV receiving devices, including DVRs with built-in NTSC tuners.

CEA/CERC’s comments suggest that retailers may remove the warning labels.

“In order to prevent screen damage upon removal by a consumer *or retailer*, consideration should be given to alternatives to placing the label “on the screen” so long as it is attached to the product as

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<sup>28</sup> Id. at 7.

<sup>29</sup> Philips Doc. 05-24 FNPRM comments at 6.

shipped.”<sup>30</sup> (emphasis added)

Retailers should not be allowed to remove the warning label. This would frustrate the purpose of effective point-of-sale consumer education and hinder the rapid adoption of ATSC television sets by consumers. The FCC and Congress should therefore impose substantial penalties for the removal of prescribed warning labels by retailers and put into place a program for enforcing that requirement.

One DTV bill in Congress allows 120 days to draft language for a warning label. This is absurdly excessive. This should not be a committee effort; I would hope that there would be two or three FCC staffers well-informed and smart enough to come up with explicit, effective text in a couple of days. Label-writing can start now, with specific dates filled in when the DTV bills get out of conference.

The industry strongly opposes labeling, and their participation would only serve to delay the process and water down the language. (fox guarding the chickens?)

### 3. Sets smaller than 13”

CEA/CERC comments on mandated digital tuners for NTSC/ATSC sets smaller than 13” again demonstrate the industry’s total disconnect with the realities of the transition to the U.S. digital TV standard.

“With respect to new receivers with screen sizes less than 13 inches, CEA and CERC believe that experience is necessary with the small chassis products that currently are subject to the Commission’s tuner requirements before the feasibility can be determined regarding the inclusion of digital tuners in some of these products, which may be radically smaller and less expensive. At present, it appears that the cost and development burdens on manufacturers, and the impact on consumers, would outweigh any possible benefits.”<sup>31</sup>

It reminds me of their intent to continue building and selling NTSC-

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<sup>30</sup> CEA/CERC Doc. 05-24 FNPRM comments at 16.

<sup>31</sup> CEA/CERC Doc. 05-24 FNPRM comments at 3.

only sets six months after NTSC broadcasts were to have been shut down. The fact that an NTSC-only TV set is 9” isn’t somehow going to keep it working after analog signals are gone. They seem to be saying that it’s too much trouble to build digital sets less than 13” in size, and the benefit to the consumer of such a set *actually working* would be trivial by comparison! (Oh, and they also seem to be saying that a cheap set that *doesn’t* work would be better for the consumer than a more costly set that actually *does* work.)

#### **D. Apple Pie, Motherhood, and the Bottom Line**

##### **1. Need for everyone to do their part without whining so much**

There’s too little time left in the transition and still much to do. The transition will cost everyone money and require extra effort, but sometimes you have to push that big rock up the hill to get the A-ticket ride down the other side. Too many players are congratulating themselves a little bit too much for their own part in the process, while accusing everyone else of not doing enough.

And I’ll say it again: there’s a lot of talk about focusing on the consumer’s part in the transition, but almost no action. It’s the big players talking among themselves, referring to consumers in the third person.

The bottom line apparently trumps all.

Look at Philips’ comments:

“Philips was a founding member of the Grand Alliance that pioneered the ATSC over-the-air DTV broadcast standard and continues to be a leader in the development and implementation of terrestrial digital television here and abroad.”<sup>32</sup>

Is this consistent with its position on DTV tuner integration? Hardly. How about this?

“. . . but Philips also promotes the development and introduction of

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<sup>32</sup> Philips Doc. 05-24 FNPRM comments at 3.

digital innovations . . .”<sup>33</sup>

I guess as long as it isn’t the introduction of digital tuners in small NTSC-only sets.

CEA/CERC recite the large numbers of sales of DTV products, accounting for \$billions in “consumer investment and contribution to the robust US economy.”<sup>34</sup> Of course, they don’t mention that analog-only sets are still outselling digital sets by a margin of 4 to 1 (untenable this late in the transition), or that none of these sets are manufactured in the U.S.

TiVo seems to be surprised by the transition, as if it just found out about it (maybe they did).

“As described herein, the Commission’s proposal to accelerate the DTV Tuner Deadline for DVRs to December 31, 2006, however, will have *unintended* consequences of significantly disrupting the market and causing economic hardships to manufacturers such as TiVo.”<sup>35</sup> (emphasis added)

They do seem to have picked up on the lobbyist use of the word “unintended” which somehow implies a naive oversight by the Commission. What’s really naive is the idea that the huge and unprecedented changeover from our old analog TV standard to a new and incompatible digital standard would *not* cause significant disruption and economic hardship.

TiVo complains about the need to compete with other suppliers of DVRs.

“To compete with ‘free’ DVRs supplied by cable and satellite providers, TiVo needs to keep the price of its DVR as low as possible. Adding a DTV-tuner at this stage of product development would practically double the product cost of the DVR – thereby dramatically reducing sales of the product to consumers.”<sup>36</sup>

Last time I checked, some of their competitors already had integrated

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<sup>33</sup> Id.

<sup>34</sup> CEA/CERC Doc. 05-24 FNPRM comments at 3-4.

<sup>35</sup> TiVo Doc. 05-24 FNPRM comments at 1.

<sup>36</sup> TiVo Doc. 05-24 FNPRM comments at 3.

ATSC terrestrial tuners in their DVRs. And by the way, nothing is “free” for the consumer.

DirecTV is changing out its boxes from MPEG-2 to MPEG-4 to accommodate its provision of HD programming. Cable is having to replace millions of boxes to accommodate HD programming, and will further have to invest in D/A converter boxes for their customers. Why should TiVo be special?

I checked on TiVo’s web site to see what sort of boxes they were offering, and what I found was TiVo Series 2 Technical Specs that listed: Video In: S-Video (1), Composite Video (1), RF Coax (1); Audio In: Stereo L/R RCA (1 pair); Video Out: S-Video (1), Composite Video (2), RF Coax (1) with 3/4 switch. I was honestly expecting something more sophisticated, instead of the same suite of connections used fifteen years ago.

TiVo’s web site says its box “Works with all cable, satellite, and TV antenna setup.” Really?

## 2. Low-income people

“Such a step [advancing the DTV tuner date] also would impose a significant and particular burden on the economic stratum of consumers who are least prepared to bear it.”<sup>37</sup>

As a low-income person, I am offended by the constant use of the term “low-income consumer” and the like by parties to the DTV transition. They wave it around like it’s the American flag, an untouchable taboo that can be attached to their own special interests to give them a magical shield from regulatory and legislative scrutiny. “If you make me put digital tuners in my TV sets, it will hurt low-income consumers.”

Perhaps using low-income people in this way makes up for the fact that those individuals cannot be the conspicuous consumers they love so much.

Forgive me while I rant.

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<sup>37</sup> CEA/CERC Doc. 05-24 FNPRM comments at 3.

CEA/CERC claim that low-income consumers can't afford any price increase,<sup>38</sup> without citing any studies or data. That's speculation and worse—stereotyping.

CEA has repeatedly cited their own surveys that only 12-13% of TV households rely exclusively on over-the-air TV and that only a small fraction of them said they didn't have MVPD service because they couldn't afford it. Those numbers work out to about 3.5% of U.S. TV households that cannot afford cable or satellite programming. Since digital television sets will cost far less than MVPD programming, one would expect that significantly fewer than 3.5% of the American population cannot afford a digital television. What portion of the population is classified as low-income? More than 1%? I think that might be a good bet.

How much will a digital television cost? Let's use \$300 as an example. If that set lasts fifteen years, it will cost \$1.67 per month. That compares to \$15/month for analog basic cable service, or \$50 or \$60 for "standard" service, or \$80/month if you have a digital/HD set and actually want to see digital/HD programming.

Low-income people smoke cigarettes in greater proportion than the population in general. A pack-a-day habit will cost \$150/month. Quit for two months and you've got a digital TV.

None of this is the responsibility of the government or (especially) the consumer electronics industry. Deciding how "low-income" people should be spending their money, telling them how to budget their finances, setting their priorities for them, is arrogant and paternalistic.

Low-income people may complain about prices, but so does the guy filling up his Lincoln Navigator with \$2.50/gallon gasoline. You set your priorities and you live with them.

"A doubling in price on a product [13" TVs] largely bought by low

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<sup>38</sup> Id. at 13.

income consumers can hardly be considered ‘more modest’ than the 5 to 20 percent increase in the price of the large screen products largely bought by higher income consumers.”<sup>39</sup>

CEA/CERC blithely state that 13” sets are “largely bought” by low income consumers and that large TVs are “largely bought” by higher income consumers. Is this speculative stereotyping, or do they have legitimate research data to back up these claims? It certainly is at odds with my experience with people of all incomes. Are CEA/CERC preemptively deciding what size sets are appropriate for households of different incomes? Are CEA/CERC dictating spending priorities based on income, rather than individual preference? Are they suggesting that well-off consumers don’t have a need for smaller sets?

“25 and 27-inch color TV receivers sell for as low as \$189. An increase of up to 53 percent, to \$269 - \$289, also would be quite serious for the consumers who purchase TVs in this price category.”<sup>40</sup>

Here, CEA/CERC seem to be suggesting that people who buy inexpensive TV sets do so because they don’t have enough money to buy more expensive sets. (Didn’t Rep. Joe Barton recently purchase a \$300 TV set?) Is that how they approach customers in their stores?

“Many consumers buy TV receiver products in this size category because it is all they can afford.”<sup>41</sup>

How many consumers? What percentage of consumers buying TVs between 13” and 25” do so only because they cannot afford a bigger set? Do they routinely ask customers about their incomes? How does CEA/CERC know what people can afford? Usually people use the word “afford” to mean what they want to spend on a product because of their priorities.

“Many buy them on *layaway plans*.”<sup>42</sup>

How many low-income customers buy TVs on layaway plans? What

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<sup>39</sup> CEA/CERC Doc. 05-24 FNPRM comments at 9.

<sup>40</sup> Id.

<sup>41</sup> Id.

<sup>42</sup> Id.

percentage? Layaway plans are installment purchases. When people buy things using a credit card (unless they pay off their balances every month), they are buying things that they cannot afford and paying off those purchases in installments. How many well-off consumers carry balances on their credit cards? How many well-off consumers buy nice cars on an installment plan that they cannot afford to buy outright? I wonder if the people at CEA and CERC know anybody who does that? Do they denigrate people who buy cars with monthly payments? Do TV salespeople worry about customers' budgets and refrain from trying to sell them TV/MVPD packages?

“Many retail customers of CERC members do not have checking accounts.”<sup>43</sup>

How many? Do retailers ask their customers who pay in cash if they have a checking account? Last time I checked, Circuit City was accepting American greenbacks for the Chinese-built TVs it sells. Is the fact that all people do not having checking accounts a valid justification for not putting digital tuners in small TV sets? Are analog broadcasts going to be shutoff only for people with checking accounts?

“As incredible as it may seem, today's 60-inch high definition set costs no more in constant dollars than the 19-inch color set of the early 1970's or the small black-and-white set of the 1950's.”<sup>44</sup> (Philips)

TV sets are extremely affordable from a historic perspective; I've been saying that all along. ATSC televisions will be affordable by low-income people. And if it's a priority for them, they will be able to buy a nice big HD set.

### 3. Footdragging and the need to stay on track

Footdragging by virtually all parties to the transition resulted in the need for Congress to delay its conclusion. There seems to be substantial political will to hold firm to the new end-2008 date in order to realize the benefits that the return of valuable spectrum will bring. Nevertheless, many special interests are

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<sup>43</sup> Id.

<sup>44</sup> Philips Doc. 05-24 FNPRM comments at 8.

still looking to further delay the end of the transition.

It is vital for consumer acceptance of the transition that NTSC-only sets be removed from the marketplace, and that widescreen ATSC television sets of all sizes become readily available to the American public. This can be done by direct regulation or by effectively educating the public on the details of the transition (which will eliminate the demand for analog sets). The best result will be achieved by combining both actions.

The FCC can also facilitate consumer demand for television sets with digital reception capability by encouraging practices and decisions that provide incentives for consumer uptake of digital sets, and discouraging those practices and decisions that act as disincentives to consumer adoption of digital television.

Noble statements by special interests must be enforced by the government.

“Thus the full benefit of this greatly increased spectrum efficiency will be realized by consumers only at the end of the digital transition. This fact requires diligent attention and consistent policy decisions to ensure that the full benefits of the digital transition are realized by consumers in the most expeditious manner. Delay tactics and hesitation to invest cannot be entertained.”<sup>45</sup> (CEA)

The biggest danger now seems to be in the mis-use of the two extra years of transition time that Congress is giving us.

### **Consumer Electronics Industry**

“A Likely Change in the DTV Transition Deadline to Establish a 2009 “Hard Date” for Cessation of Analog Broadcast Transmission Has Eroded the Commission’s Rationale for Accelerating the DTV Tuner Mandate”<sup>46</sup> (Philips)

The purpose of the 10-year transition was in great part to allow the American public the opportunity to replace their analog sets with digital sets

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<sup>45</sup> Consumer Electronics Association comments, May 17, 2000, MM Docket 00-39, at 18.

<sup>46</sup> Philips Doc. 05-24 FNPRM comments at 7.

over a period of years in normal replacement cycles. Congress felt the need to extend the transition period precisely because consumers have not been able to purchase digital TVs in substantial numbers, largely because the consumer electronics industry has not been building them in sizes smaller than 35” (representing the vast majority of TVs in American homes).

Adding two years to the end of the transition is supposed to give consumers an additional two years in which to buy digital sets, not to give the consumer electronics industry another two years to foist obsolete analog sets on an unsuspecting American public. The rationale for accelerating the DTV tuner mandate is as strong as ever; the delay in the end of the transition gives the tuner requirement a chance to actually make a difference. Retaining the 2007 deadline would most certainly result in added pressure to delay the analog shutoff date even further. Someone has to say enough is enough.

Philips has already started lobbying to add another year to the transition, beyond the two extra years that aren’t yet on the books:

“Retention of a July 1, 2007 deadline for 13”- 24” television receivers would still provide consumers with anywhere from 18 to *30 months* prior to cessation of analog broadcasting in which to choose from an array of television sets, all of which would have digital reception capability.”<sup>47</sup> (emphasis added)

The new end-of-transition date is December 31, 2008. Retaining the July 1, 2007 DTV tuner date for small TVs gives the consumer only 18 months in which to buy a digital TV, not 30 months. 30 months would put the end of the transition out to the end of 2009, perhaps Philips’ intent.

18 months is simply not enough time for consumers. Not enough time for consumers to buy digital sets, and certainly not enough time for the consumer electronics industry to build enough digital sets to meet demand.

30 months would be a lot better (still far from ideal), which would put the DTV tuner requirement for small TVs at July 1, 2006.

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<sup>47</sup> Philips Doc. 05-24 FNPRM comments at 7-8.

## Commercial Broadcasters

The broadcast industry must be encouraged to start to air public service spots educating the public on the details of the transition. These spots should be aired frequently, and there should be explicit information on broadcast stations and network web sites (prominently displayed).

The NAB noted that “the television broadcast industry recently informed Congress that it accepted that Congress would soon establish a hard date for terminating analog television service in 2009.”<sup>48</sup> The broadcast industry is another one of the footdraggers, failing to endorse and work to make the end-2008 end-of-transition date successful. In Fritts’ July 12 oral testimony, when pressed by Senator McCain for an expression of support for the end-2008 date, he waffled by adding “or sometime in 2009.”

## Public Broadcasters

The comments of the Association of Public Television Stations were essentially devoted to a bid to run a new “independent quasi-governmental corporation to comprehensively oversee the public relations aspects of the cessation of analog broadcasting.” It would be called “SwitchCoUSA.”<sup>49</sup>

I wasn’t really surprised. John Lawson (President and CEO of the Association of Public Television Stations), in his July 12 DTV Senate testimony, called for a “well-funded” campaign to educate consumers about the transition. He warned that if the government failed to do that, the transition would have to be postponed.

“APTS stands ready to lead this initiative with key industry partners, *provided that adequate resource support is provided.*”<sup>50</sup> (emphasis added)

“*With adequate resource support* and the cooperation of key partners, APTS could design an effort that has three related elements to ensure a successful DTV transition: • Public television public service

<sup>48</sup> NAB Doc. 05-24 FNPRM comments at 3.

<sup>49</sup> PBS Doc. 05-24 FNPRM comments at 2.

<sup>50</sup> Id at 4.

announcements . . .”<sup>51</sup> (emphasis added)

One might wonder why PBS stations are not already making informative public service announcements detailing the transition from NTSC to ATSC TV standards, given that the Federal government provides a substantial amount of their funding. At the end of every PBS show, I see several minutes of commercials promoting other PBS shows, but I’ve never seen a PBS educational spot explaining the transition to the ATSC television standard.

## **Cable**

The cable industry needs to do more to make digital/HD network programming available to the public on an equal basis with analog. Not doing that is a serious disincentive for many people thinking of buying a digital TV.

I am in the process of moving from a shared house that has a big antenna on the roof to a ground-floor apartment where the only possible source of TV programming is from Time-Warner cable. They offer a “basic” package for about \$15/month; with this you get the analog network channels.

Time-Warner also carries the networks’ digital/HD channels, but to get these you have to order the “standard” package plus the digital tier upgrade. That pushes the price up to the neighborhood of \$80/month. That cost is prohibitive, roughly \$15,000 over the life of a digital TV. Why can’t Time-Warner offer a “basic” digital package for people who would buy a digital cable ready HDTV if they could get the digital network programming for the same \$15/month price as the analog “basic” package? Certainly the bandwidth used would be no greater than for their analog offering. (All those other channels that you get with the “standard” package? I would only watch *one*; I’ll wait for a la carte channel pricing or buy the series DVDs—that would be a lot cheaper.)

## **Consumers Union**

Gene Kimmelman of Consumers Union in his testimony before House and Senate committees suggested that the government hold consumers harmless

<sup>51</sup> Id. at 3.

for the taking of their analog television service, compensating them, paying for D/A converter boxes. In response to a question from Senator McCain, Kimmelman suggested that the hard analog cutoff date may well be changed in a couple of years.

“Consumers buy televisions with the reasonable expectation that they will be able to receive broadcast signals over the life of the set. And that life can be substantial. Research from Consumer Reports shows that televisions are the workhorses of consumer electronics: they last for decades. Even today, as Congress focuses on a hard digital television transition date, millions of consumers are buying new analog sets on the assumption they will work for years to come. The digital transition turns that assumption on its head: for consumers relying on over-the-air broadcasts, the sets will be useless for their primary purpose.”<sup>52</sup>

That’s what Consumers Union told the Senate. What it has been telling consumers in its Consumer Reports magazine is something else altogether.

In its March 2002 issue, there was no mention at all of the transition to digital TV in an article on TVs. In its December issue, they said “Digital TVs are in the news, but conventional TVs are still fine for mainstream viewing.”<sup>53</sup> and “By the way, you needn’t worry that an analog TV will become outmoded when broadcasts go digital, as the government is mandating. The transition will take years, and any set you buy now can be paired with a digital decoder that would enable you to receive and view digital broadcasts, but not in HD quality.”<sup>54</sup>

In the March 2003 issue (and every December as well), the same “don’t worry” message was delivered and they offer the following advice: “. . . conventional analog TVs—the kind you’ve been watching for years—can deliver outstanding performance for less.”<sup>55</sup>

In the March 2004 issue, Consumer Reports is still recommending 4:3 analog sets and advising readers: “If you are leaning toward a conventional

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<sup>52</sup> Consumers Union written testimony before House Energy and Commerce Committee, May 26, 2005, at 3.

<sup>53</sup> Consumer Reports magazine, 12/02, at 19.

<sup>54</sup> Id. at 20.

<sup>55</sup> Consumer Reports magazine, 3/03, at 21.

analog set, don't worry that it will no longer work once all broadcasters have complied with the government-mandated transition to digital signals. . .”<sup>56</sup>

The same advice came again this past December. I would expect a consumer advocacy group with the reach of Consumers Union to use that power to fully educate the American public about the transition to digital television. Instead, they have reviewed and recommended 4:3 analog sets to consumers, assuring them they will work for years, while telling Congress that these same consumers are unwittingly buying analog TVs “on the assumption” that they will work for years, when in fact they will be “useless.”

## **Conclusion**

Nobody seems willing to tell consumers that the old analog NTSC television standard is in the process of being replaced by the incompatible digital ATSC standard. Nobody wants to tell them that they should already have been planning for the transition. Nobody is telling them that the end of the transition is near.

As long as the public doesn't know any of that, there is always the opportunity to delay and delay until time runs out again, plant the blame on somebody else, and then leave the FCC and Congress holding the bag.

We now have an opportunity to force a break in that cycle. And it will take force and resolve on the government's part. It means setting the date for all TV receivers to have digital reception capability by July 1, 2006, or no later than the fall of 2006, and implementing an early and effective labeling requirement.

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August 10, 2005

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<sup>56</sup> Consumer Reports magazine, 3/04, at 28.